

Claims

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1. A halogen-free, multilayered heat shrink film comprising (A) a core layer comprising a copolymer of ethylene or propylene with an alpha olefin and the core having an upper and lower surface, (B) a skin layer on the upper surface of the core layer, wherein the skin layer comprises a polyolefin or polyolefin blend and (C) a printable layer on the lower surface of the core layer, wherein the shrinkage of the film is at least about 30%.

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2. The film of claim 1 wherein (A) is a copolymer of ethylene or propylene and butene or hexene.

3. The film of claim 2 wherein the copolymer has a butene content of about 3% to about 20%.

4. The film of claim 1 wherein the core layer further comprises an olefin homopolymer.

5. The film of claim 4 wherein the olefin homopolymer is propylene or butylene homopolymer.

6. The film of claim 1 wherein (B) is polypropylene, polybutene, or a propylene and butene copolymer.

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7. The film of claim 1 wherein (B) is a polyolefin blend of a polyolefin homopolymer and a copolymer of ethylene or propylene and an alpha-olefin.

8. The film of claim 1 wherein (B) is a polyolefin blend of a propylene homopolymer and a copolymer of propylene and an alpha olefin.

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9. The film of claim 1 wherein (C) is blend of a polyolefin and a soft polar/additive.

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A3

10. The film of claim 9 wherein the polyolefin is an ethylene or propylene homopolymer or a copolymer of ethylene and propylene.

cont Sub
A3 11.

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A halogen-free, multilayered heat shrink film comprising (A) a core layer comprising a blend of (1) a copolymer of ethylene or propylene with an alpha olefin and (2) a homopolymer of an olefin, and having an upper and lower surface, (B) a skin layer on the upper surface of the core layer, wherein the skin layer comprises a polyolefin homopolymer or a blend of a polyolefin homopolymer and a copolymer of ethylene or propylene and an alpha olefin and (C) a printable layer on the lower surface of the core layer, wherein the printable layer comprises a blend of a polyolefin and a soft polar additive, wherein the shrinkage of the film is at least about 35%.

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12. The film of claim 11 wherein the copolymer of (1) is a propylene and butene copolymer.

13. The film of claim 11 wherein homopolymer of (2) is a polybutene.

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14. The film of claim 11 wherein the polyolefin homopolymer is polypropylene or polybutene and the copolymer is a propylene butene copolymer.

15. The film of claim 11 wherein the polyolefin is a polypropylene or polyethylene and the soft polar additive is ethylene vinyl acetate.

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Sub
B4

16. An article encapsulated with a multilayer heat shrink film of claim 1.

17. A article encapsulated with a multilayer heat shrink film of claim 10.

18. The article of claim 16, wherein the article is a battery.

Sub
E1

19. The article of claim 17, wherein the article is a battery.

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